Wykamol Group

data sheet

# drainflo

Fully automatic pumping station specifically designed for pumping both foul and storm water

**Description**

The drainflo is a fully automatic pumping station specifically designed for pumping both foul and storm water when gravity drainage is not possible or economical to install.

The system is suitable for installing either at the initial building stage or retro fitting to existing buildings and can accept waste from a basement, entire house or similar.

The system consists of a tank, locking access cover, internal pipework and fittings, control panel, float switches and a built in submersible pump.

The drainflo is easy to install as inlets can be positioned to your requirements (inlet information to be supplied at time of order).

**Installation Guidelines**

It is important to note that these instructions are for guidance only and it is the contractor's responsibility to satisfy themselves that the installation procedure is in accordance with the prevailing ground conditions and good building practice, to eliminate any potential damage to the pumping station either during or after installation.

The tank is manufactured from 6mm gauge polyethylene or polypropylene and as such is extremely robust. However, as with any preformed tank they are susceptible to floatation and hydrostatic pressures exerted in high water table conditions.

Please read these instructions in full, prior to commencement of installation. If you are unsure on any point then ask for advice before proceeding. Our technical help desk is available on 01706 831223 from 8.30am – 5.30pm, Monday to Friday.

1. Select a suitable location for the pumping station. Where possible, installation of a pumping station in a roadway should be avoided due to the need for periodic maintenance of the pump contained therein. If the location is adjacent to a roadway, the installation method should take account of the imposed loads likely to be transmitted to the tank by traffic etc.
2. In all instances the tank MUST be positioned on a flat, level, set concrete base of dimensions sufficient to fully support the base of the tank. The thickness of the base should be adequate for the ground conditions and of minimum 150mm thickness. Carefully position the tank onto the base slab ensuring that no loose debris is inadvertently knocked onto the base slab, under the tank during this procedure. Position it such that the inlet and outlet pipework is correctly aligned.
3. Once the tank is positioned connect the incoming pipe/s to the tank via the fitting supplied. The discharge pipework can then be connected via the tank connector supplied. We recommend that the discharge pipework should be black MDPE, solvent welded plastic pressure pipe or galvanised screwed pipework.
4. The electrical cables should now be drawn through the fitting supplied back to the electrical source.
5. The vent duct (if applicable) should be vented to atmosphere.
6. In dry stable ground conditions where the water table will never rise above the base slab the tank may be back filled with a dry lean mix concrete of minimum 150mm thickness. In wet unstable ground conditions a mass concrete mix must be used in accordance with the ground conditions and be as dry as practical to prevent additional floatation pressures being exerted on the tank. In both instances the tank MUST be ballasted with water at the same rate as back filling such that the level difference between the water and back fill does not exceed 300mm at any time.
7. Where ground water is present in the excavation, de-watering must be undertaken throughout the installation procedure and until the back fill has completely cured.
8. Similarly, the ballast water inside the tank should not be removed until the back fill has fully cured.
9. The system is supplied as standard with a pedestrian duty access cover fitted onto the top of the access shaft such that the tank should be installed with the cover flush with finished ground level. In a roadway application, the tank should be installed with the top of the access shaft a minimum of 100mm below finished ground level to allow a suitable rated cover and frame to be bedded into a reinforced cover slab (to be specified at time of order), such that it does not bear on undisturbed ground around the excavation and not directly onto the tank, to allow imposed loads to be deflected away from the tank. Design of the cover slab is the responsibility of the contractor/structural engineer.
10. It is extremely important that once the tank has been installed and all the inlet connections made, before the pump is installed, the system is flushed through and all sand, silt, rubble and general debris is removed from the tank. FAILURE TO DO THIS WILL INVALIDATE THE WARRANTY ON THE PUMP.
11. The control panel housing (if applicable) must be sited adjacent to the tank on a suitably sized concrete plinth complete with cable ducts for the cabling from the tank and the incoming power supply. If the control panel is not to be sited adjacent to the tank we should be advised at time of order so that we can make recommendation as to the cabling required. A QUALIFIED ELECTRICIAN MUST CARRY OUT ALL ELECTRICAL CONNECTIONS.

drainflo

**Maintenance**

IMPORTANT – Before carrying out any maintenance work the unit should be completely disconnected from the mains, and measures should be taken to prevent the unit being inadvertently switched back on. The maintenance hints given here are not provided for "do-it-yourself" repairs, as some special technical knowledge is required.

We recommend that the unit be inspected every three months. The inside of the tank should be inspected to ensure the floats are clean and free of any build up of materials that may inhibit the operation of the float switches. Also the moving parts of the pump should be checked to ensure that they are moving freely. Hose down the interior of the tank if necessary to remove any build up of solid materials and the bottom of the tank should be checked to make sure there is no debris or materials that could enter the pump and cause irreparable damage.

In addition we recommend that a service contract be taken out *(please contact Wykamol on 01706 831223 for further details).*

**Health and Safety**

Please pay attention to the following regulations when installing the pump or ask your qualified electrician/distributor.

*Safety Precautions*

In order to minimise the risk of accidents in connection with the service and installation work the following rules should be followed;

- Never work alone. Use a lifting harness, safety line and respirator as required. Do not ignore the risk of drowning.
- Make sure there are no poisonous gases within the work area.
- Check the explosion risk before welding or using electric hand tools.
- Do not ignore health hazards. Observe strict cleanliness.
- Bear in mind the risk of electrical accidents.
- Make sure that the lifting equipment is in good condition.
- Provide a suitable barrier around your work area, e.g. guard rail.
- Make sure you have a clear path of retreat
- Use a safety helmet, safety goggles and protective shoes.
- All personnel who work with sewage systems must be vaccinated against diseases to which they may be exposed.
- A first aid kit must be close to hand.
- Note that special rules apply to installations in an explosive atmosphere.

*Electrical Connections*

- The following works should only be done by qualified and authorised electricians.
- Wykamol disclaims all responsibility for work done by untrained or/and unauthorised personnel.
- Heed operating voltage (see name plate and additional labels).
- Take out the main fuses to isolate the mains supply from the control unit before repairs or any other works and ensure it cannot be energised again.
- If the pump is equipped with an automatic level control, there is a risk of a sudden restart.
- Before starting check the efficiency of the protective arrangements of the pump and the monitoring equipment. Failure to heed this warning may cause a lethal accident.
- Do not put the lead ends into water! Irruption of water may cause malfunctions.
- If persons are likely to come into physical contact with the pump or pumped media, the earthed (grounded) socket must have an additional connection to an earth (ground) fault protection device (GFI).
- Use the pump only in accordance to the data stated on the pumps plate respectively. Special rules apply to installations in explosive atmosphere. Intrinsically safe circuits (Exi) are normally required for the automatic level control system by level regulators.
- Connection only to a mains supply installed in accordance to the local regulations. For fusing of d.o.l. starting pumps use only 10A slow fuses or automatic circuit breakers with C or D characteristics. This is because the motor's nominal voltage is measured at the terminal board of the pump; please consider the voltage drop of long supply cables.
- The motors of the three-phase AC pumps must be protected by a suitable over current release. Adjustment as follows; Direct start +10% of normal current Star-delta start (nominal current x 0.58) + 10% If the protective arrangement has triggered, eliminate the trouble.
- Replace the cable if the cable jacket is damaged. Do not pinch the cable or pull it around sharp bends.
- Always install the control unit in a dry and well-ventilated room above the back pressure level. Never install the control unit within the sump.

*Earthing*

For safety reasons, the earth conductor should be approximately 50mm (2") longer than the phase conductors. If the motor cable is jerked loose by mistake, the earth conductor should be the last conductor to come loose from the first terminal. This applies to both ends of the cable. Ensure the correct earthing of the pump and control unit.

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